

Work Order ID 115541

Thursday, April 03, 2014 3:04:41 PM

115541

Page 1

Item ID: D500-572-011 Used

Revision ID:

Item Name: Bearpaw

Start Date: 4/3/2014 Start Qty: 1.00 ***1***

Required Date: 4/4/2014 Req'd Qty: 1.00 ***1***

Reference: RMA RA111706

Accept

N900040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer: CHMAR01

Approvals: Process Plan: MF Date: 14-4-3

QC: _____ Date: _____

Tooling: _____ Date: _____

SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2435

Rev E1

IIND500-572

RevA

100

0.00

100

QC

Quality Control

Memo

INSPECT RA 111706 D500-572-011 X 1 B77775

KIT HAS BEEN USED BUT CAN GO BACK INTO STOCK AS
D500-572-011 Used

no paperwork
id and stock under new batch number

110

110

Packaging

Packaging

Identify as per dwg & Stock Location: FG 011

Memo

0.00

0.00

DAS
06
9-89

APR 10 2014

SHF
4/4/9

MLJ 140410

used Bearpaw kit

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 115541

Thursday, April 03, 2014 3:04:41 PM

115541

Page 2

Item ID: D500-572-011 Used

Revision ID:

Item Name: Bearpaw

Start Date: 4/3/2014 Start Qty: 1.00 *1*

Required Date: 4/4/2014 Req'd Qty: 1.00 *1*

Reference: RMA RA111706

Accept

N900040100Setup Start ***NS1***Stop ***NS2***

Cust Item ID:

Customer: CHMAR01

Approvals: Process Plan: _____ Date: _____

QC: _____ Date: _____

Tooling: _____ Date: _____

SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***Sequence ID/
Work Center ID

120

120

QC

Quality Control

Operation
Description

QC21- Final Inspection - Work Order Release

Memo

Set Up/
Run Hours

0.00

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

MLJ 14-04-12

ME
14-4-10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
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Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Picklist Print

Thursday, April 03, 2014 3:04:35 PM

Page 1

Work Order ID: 115541

115541

Parent Item: D500-572-011 Used

D500-572-011 Used

Parent Item Name: Bearpaw

Start Date: 4/3/2014

Required Date: 4/4/2014

Start Qty: 1.00

Required Qty: 1.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D500-572-011 Used

Manufactured

No

Each

0.0000

1

D500-572-011 Used

Bearpaw

1 X 37775
MF
14-4-3

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
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Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other _____ _____ _____
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RA111706 D500-572-011 B77775

RECEIVED MARCH 20, 2014
INSPECTED MARCH 28, 2014

CUSTOMER: HELI-MART INC
CONTACT: ED BROWN
SHIPPED FROM: COSTA MESA, CA, US

Instructions for RA111706 D500-572-011 B77775

- Part have being use by customer
- ~~All parts are scraps~~

Time Estimate = 2 HOURS

Departments Required: small fab

Pictures Attached = N/A

QTY INSPECTED = X1 D500-572-011 B77775

**THIS INSTRUCTION SHEET MUST
BE ATTACHED TO THE
RESTOCKING WORK ORDER AT
ALL TIMES!!!!**

Work Order ID 77775

December-21-11 9:50:26 AM

77775

Page 1

Item ID: D500-572-011

Revision ID:

Item Name: Bearpaw

Start Date: 21/12/2011 Start Qty: 4.00

Required Date: 06/01/2012 Req'd Qty: 4.00

Reference:

Accept

N9000040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Approvals:

Process Plan: MLJ

Date: 11/12/21

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2435

Rev E1

IIND500-572

RevA

100

100

DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy bluefile and create labels per PPP D500-572-011 CHG005

0.00

0.00

5/2/28

MLJ 12/02/28

160

160

Packaging

Packaging

Pick Kit

Memo

0.00

0.00

5x SP12-02-28

Work Order ID 77775

December-21-11 9:50:26 AM

77775

Page 2

Item ID: D500-572-011

Revision ID:

Item Name: Bearpaw

Start Date: 21/12/2011 Start Qty: 4.00

Required Date: 06/01/2012 Req'd Qty: 4.00

Reference:

Accept

N9000040100Setup Start ***NS1***Stop ***NS2***

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____

QC: _____ Date: _____

Tooling: _____ Date: _____

SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC4- 100% Inspect kits for completeness

0.00

170

QC

Memo

0.00

Quality Control

5/12/02/28

180

Packaging

0.00

180

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPPD500-572-011 Location: 012

New A

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

MCJ 12/02/28

MF
12-02-28

Picklist Print

December-21-11 9:50:30 AM

Page 1

Work Order ID: 77775

77775

Parent Item: D500-572-011

D500-572-011

Parent Item Name: Bearpaw

Start Date: 21/12/2011

Required Date: 06/01/2012

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:C04.02.17Blank size changedKJ/JLM

IPP Rev:D 07-01-02 Was K10007 JLM

IPP Rev:E 08-01-09 Added Step 2 JLM

IPP Rev:F 08-10-15 New Manufacturing Method JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

QS200-M44S

Purchased

No

120

Each

46.0000

2

810

**

QS200-M44S

Clamp

Location

Loc Qty

Loc Code

ST455

46

115589

3

117460

13

119436

30

AN4-15A

Purchased

No

170

Each

193.0000

8

3240

**

AN4-15A

Bolt

Location

Loc Qty

Loc Code

ST358

193

118112

4

118648

63

118706

19

119749

2

119862

105

AN960JD416

NAS1149D0463J

Purchased

No

170

Each

0.0000

8

3240

**

AN960JD416

Washer

DAS
32
9-89

Picklist Print

December-21-11 9:50:30 AM

Page 2

Work Order ID: 77775

77775

Parent Item: D500-572-011

D500-572-011

Parent Item Name: Bearpaw

Start Date: 21/12/2011

Required Date: 06/01/2012

Start Qty: 4.00

Required Qty: 4.00

D2182B

Manufactured No

170 f

580.1642 1.666 6.664

**

D2182B

Rubber Cushion

Location

Loc Qty

Loc Code

ST410

580.16417

66063

53.94817

73932

526.216

DAS

32

9-89

(D2182B050) cut 4 at 5.00"

D2274

Manufactured No

170 Each

1.0000 8

**

D2274

Radius Block

Location

Loc Qty

Loc Code

ST010

1

73389

1

DAS

32

9-89

D2435

Manufactured No

170 Each

1.0000 2

**

D2435

Bearpaw, 206

Location

Loc Qty

Loc Code

ST195

1

73982

1

DAS

32

9-89

D2438

Manufactured No

170 Each

127.0000 4

**

D2438

Clamp

Location

Loc Qty

Loc Code

ST456

127

69737

84

73400

43

DAS

32

9-89

December-21-11 9:50:30 AM

Shop Packet Print

Page 2

Picklist Print

December-21-11 9:50:30 AM

Page 3

Work Order ID: 77775

Parent Item: D500-572-011

Parent Item Name: Bearpaw

77775

D500-572-011

Start Date: 21/12/2011

Required Date: 06/01/2012

Start Qty: 4.00

Required Qty: 4.00

D2529

Manufactured No

170

Each

226.0000

8

D2529

Washer

**

3240

B79221 40k SP

Location

Loc Qty

Loc Code

ST016

226

71161

6

76086

220

Purchased

No

170

Each

9,077.000

8

MS21042L4

MS21042L4

**

3240

SP 12-02-28

Location

Loc Qty

Loc Code

ST300

9077

117441

51

117601

342

118451

133

119017

3551

119075

5000

40x

SP ✓

68-6

32

DAS

December-21-11 9:50:30 AM

Shop Packet Print

Page 3



RELEASED
48 DEC 17 KE

ENGRAVE LOGO TO MAX
DEPTH OF 0.012. ENGRAVE
PART AND BATCH NUMBERS
TO MAX DEPTH OF 0.010.
(TYPICAL LOCATION AS
ILLUSTRATED)

SHOP CO
RETURN
ENGINEER
UNCONTROLLED COPY
SUBJECT TO APPROVAL
WITHOUT
WORK OF
NO. 73377



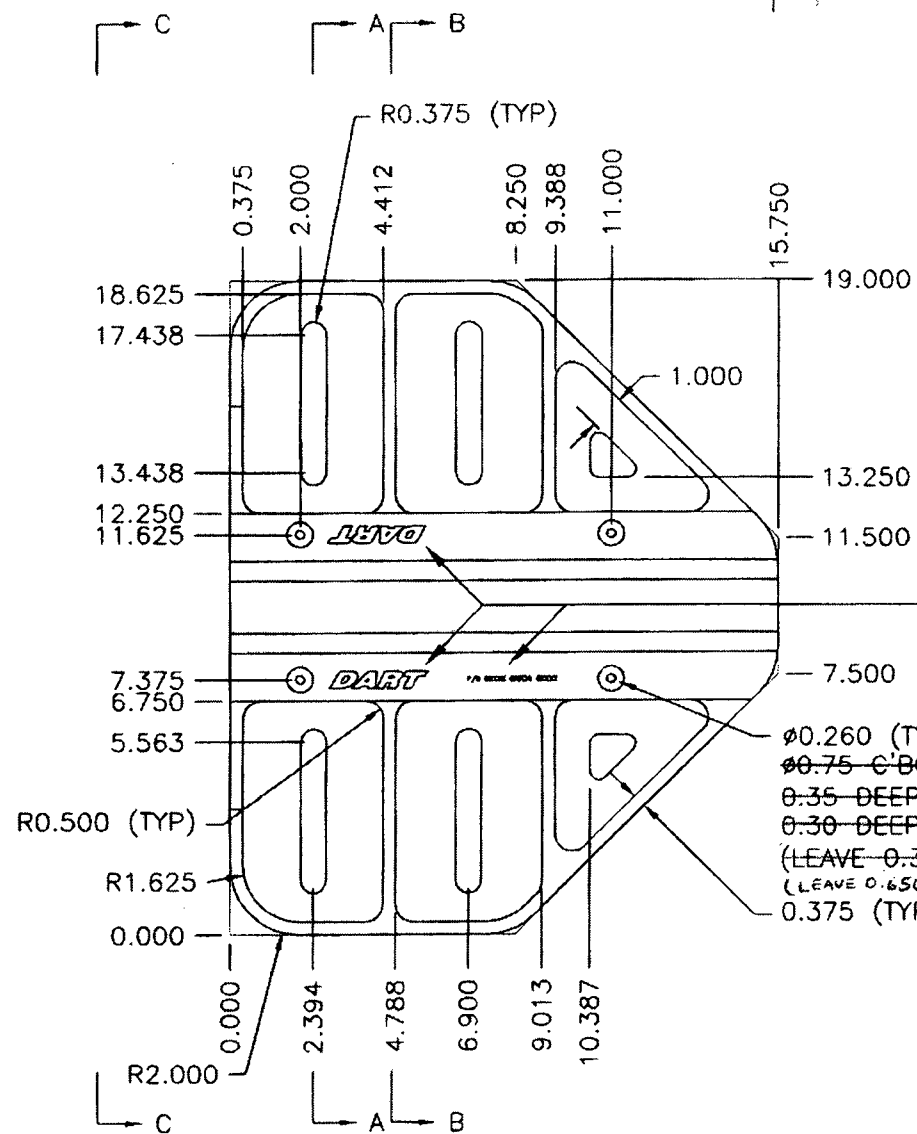
0.93 C'BORE

0.30 DEEP FROM TOP (MIN.)
0.30 DEEP FROM BOTTOM
(LEAVE 0.300 MIN.)
(LEAVE 0.650 MIN.)
0.375 (TYP)



9143

DESIGN	DRAWN BY	DART AEROSPACE LTD
KE	KE	HAMKESBURY, ONTARIO, CANADA
CHECKED 9143	APPROVED 9143	DRAWING NO. D2435
DATE 98.05.19	TITLE BEARPAW	REV. E SHEET 1 OF 2
		SCALE 1:5
A	96.01.24	NEW ISSUE
B	96.03.26	CHANGE BORE AND C'BORE DEPTH
C	97.05.07	CHANNEL & C'BORE DEPTH CHANGED
D	97.10.17	R1.5 BORE WAS R2.637 (TSR A469)
E	98.05.19	CHANGE C'BORE, R1.58 WAS R1.50

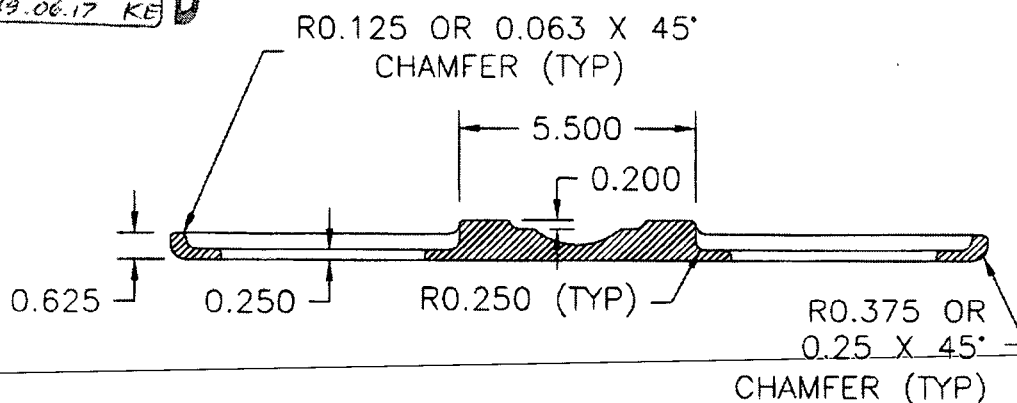


MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689
1.00 THICK (MACHINE TO 0.950)

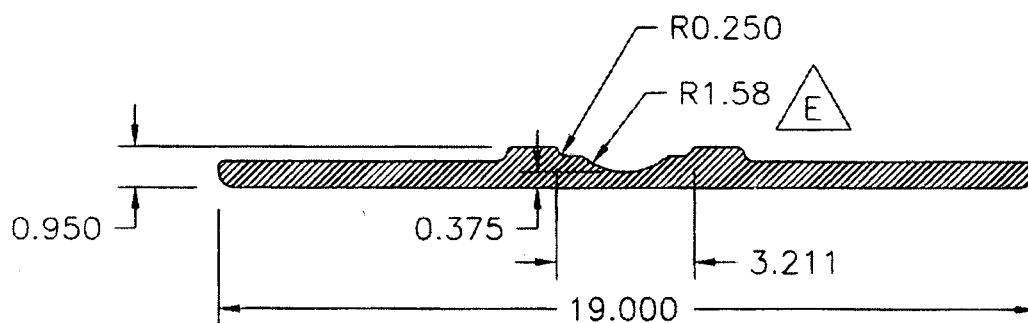


DESIGN <i>KE</i>	DRAWN BY <i>KE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>DP</i>	APPROVED <i>KE</i>	DRAWING NO. D2435	REV. E SHEET 2 OF 2
DATE 98.05.19	TITLE BEARPAW		SCALE 1:4

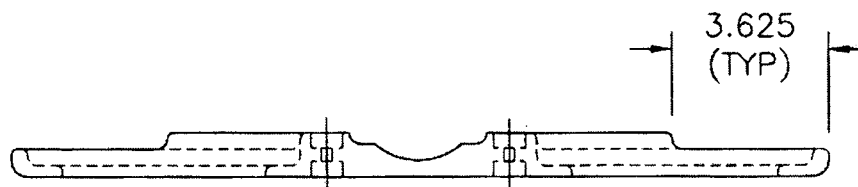
RELEASED
99.06.17 KE



SECTION A-A



SECTION B-B



SECTION C-C

Stttt

REFERENCE ONLY

4. WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D500-572-011 Bearpaw Installation	8.5 lb 3.86 kg	0.0 in 0.0 m	0.0 lb-kg 0.0 m-kg	130 in 3.30 m	1105 in-lb 12.74 m-kg
D500-572-021 Narrow Bearpaw Installation	7.5 lb 3.41 kg	0.0 in 0.0 m	0.0 lb-kg 0.0 m-kg	130 in 3.30 m	975 in-lb 11.25 m-kg
D500-572-013 Bearpaw Installation	11.4 lb 5.17 kg	0.0 in 0.0 m	0.0 lb-kg 0.0 m-kg	128 in 3.25 m	1459 in-lb 16.80 m-kg
D600-572-015 Bearpaw Installation	11.4 lb 5.17 kg	0.0 in 0.0 m	0.0 lb-kg 0.0 m-kg	122 in 3.10 m	1391 in-lb 16.03 m-kg

5. PARTS LIST

Qty D500 -572 -011	Qty D500 -572 -021	Qty D500 -572 -013	Qty D600 -572 -015	Part Number	Description
X				D500-572-011	BEARPAW INSTALLATION
	X			D500-572-021	NARROW BEARPAW INSTALLATION
		X		D500-572-013	BEARPAW INSTALLATION
			X	D600-572-015	BEARPAW INSTALLATION
2				D2435	BEARPAW
	2			D2671	BEARPAW
		2		D2995	BEARPAW
			2	D2996	BEARPAW
4	4	4		D2182B050	RUBBER CUSHION
			4	D2182B060	RUBBER CUSHION
8	8	8	8	D2274	RADIUS BLOCK
4	4	4		D2438	CLAMP
			4	D2519	CLAMP
8	8	8	8	D2529	WASHER
		8	8	AN4-13A	BOLT
8	8			AN4-15A	BOLT
8	8	8	8	AN960JD416	WASHER
8	8	8	8	MS21042L4	NUT (OR MS21042-4)
2	2			QS200M44S	CLAMP
			4	QS100M24S	CLAMP